
Database Maintenance

Call Accounting uses a number of databases and directories which provide costing and maintenance support for its call records. It relies on the proper maintenance of its databases to operate efficiently. Improper data management can often lead to the following:

- Lost data in the event of a disk crash when no backups have been performed
- Missing historical data because data was not archived
- Long processing times due to outdated data
- Hard disk drives filled to capacity at which point you must remove and purge data before proceeding with normal operations

Managing the databases

In order to alleviate these potential difficulties, Call Accounting provides several built-in database maintenance tools. These tools allow you to edit, build, and manipulate the databases.

Certain tasks need to be run on a regular basis to enable you to get the most out of your Call Accounting System. Following are some guidelines for maintaining your Call Accounting system.

Daily Tasks

- 1 Collect CDR data from your buffer box (it is recommended that you use a buffer box to store CDR data). Collections can be scheduled to occur automatically everyday, or they can be manually invoked each day. If you are not using a buffer box, a dedicated PC Com Port will continuously collect the CDR data as it is output from the switch.
- 2 View the log daily to ensure that your scheduled collection was successful. A list of the number of records collected by date can be found under the Database menu item, under Utilities-List Call Database Dates.

Ongoing Tasks (Recommended Weekly)

- 1 Synchronize Billing (Employee) Database with Station module. If the Billing Database is not in synch with the Station database (one or more changes have been made in station), a dialog will prompt to ask you if you wish to synchronize the database when the Billing Database menu item is accessed. If you answer yes, the Call Accounting Billing Database will automatically update to accommodate any changes you made in Station Administration.

If you are not using the Station Administration application, you will need to perform your Call Accounting Billing (Employee) Database updates manually.

- 2 Update Customer Directory. The Customer Directory allows you to assign customer names to digits dialed. The reports can then include not just the dialed number but also the Customer name. If you use the Customer Directory, it should be updated periodically.
- 3 Perform database backups. As with any database, you should perform a regular backup of your data to disk or hard drive.

Monthly Tasks

- 1 Select your reporting filters to ensure that you are reporting on the correct subset of the collected data. Typically this will include setting the date for your reporting period. Various other customization is also available through the filters.
- 2 Run your monthly reports.
- 3 Purge or Archive your data. A Purge will delete the data from your hard drive completely. Archive will allow you to store your data to disk or hard drive.

Database editing

Call Accounting requires that you manage several user-definable databases for system operation. These include the Billing Database, the Customer Directory, and the Telephone Configuration Database.

Each database contains an editor with standard features which you can use to edit, insert, and delete records. To enter the database information, click on the directory name from its appropriate drop-down menu. The database dialog will appear containing a grid in which you can enter and manage the records for that database. Some directory dialogs will list the position of the current record in the database in relation to the total number of records.

Grids

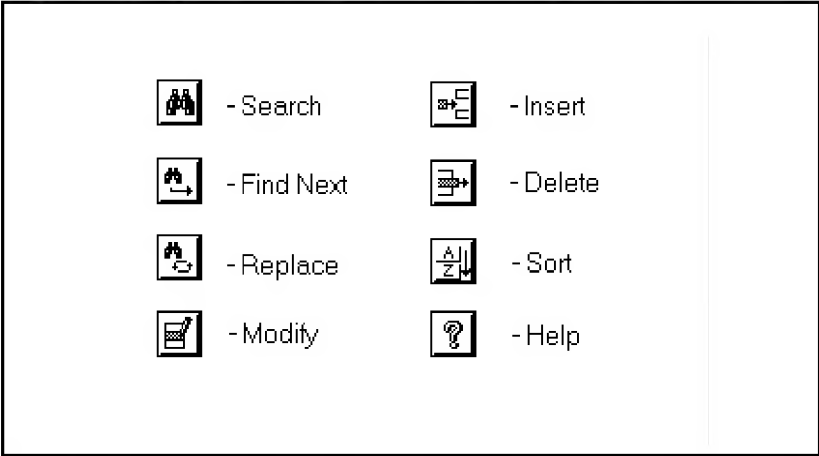
A database record is displayed in the grid of its dialog. A grid is comprised of rows (records) and columns (fields). To scroll through a grid, click on its horizontal and vertical scroll bars.

Field Sizes: To change the grid's proportions, click on the row and/or column border and drag it to the new position.

Field Positions: To rearrange the column sequence in a grid, highlight the column by clicking on its field header. Next, click on the column and drag it while simultaneously pressing the <Ctrl-Shift> keys. The column border will move as you drag the cursor across the grid. Release the cursor to place the column in its new position.

Tools: Each grid contains a toolbar that contains standard editing features such as Search, Replace, Modify, Insert, and Delete. These tools can be used instead of selecting a specific function from the grid’s menu bars.

Figure 13
Toolbar summary



Insert To enter a record in a grid, select **Insert** from the Edit cascading menu. Type in the information in the editor dialog’s fields. To save this information and exit this dialog, first click on the **OK** command button and then on the **Cancel** command button. This will insert the information into the first available record in the grid. If you highlighted a specific row of the grid, then the system will insert this record above the specified row.

Certain databases will distinguish between adding a record or inserting a record to the database grid.

Add: To enter a record at the end of the database, click on **Add**. To enter a record immediately after a specific record, highlight that record before selecting Add.

Insert: To enter a record at the beginning of the database, click on **Insert**. To enter a record immediately before a specific record, highlight that record before selecting Insert.

Once you insert or add a record, an editor dialog will appear allowing you to enter data into the record's fields. Enter this information as required and click on the **OK** command button to save the record. The system will display another blank dialog allowing you to add another record. Once you have added the required records, click on the Close command button to save this information and exit to the grid dialog. The record lines in this grid will appear updated.

Modify To modify a record in the grid, select **Modify** from the Edit cascading menu. An editor dialog will appear prompting you to edit the record's information. Click on the fields of that record to edit its information and type the new text over the old. To save this information and exit this dialog, first click on the **OK** command button and then on **Cancel**.

Delete To delete a record from the database grid, click on the record row header to highlight it and select **Delete** from the Edit cascading menu. You can also click on the Delete tool from the toolbar.

Sort Use the Sort command to sort the records in the database according to specific criteria. These are based on the database fields. To sort the database, select **Sort** from the Edit cascading menu. This will access the Sorting Priority dialog in which you can enter the sort criteria for the records (e.g., alphabetically by surname).

The following example illustrates the use of this function.

If you wish to sort the Billing Database by division, department, and extension, then access the Billing Database and perform the following steps.

- 1 Click on the **Sort** tool.
- 2 From this dialog, enter the sort criteria by double-clicking on the field name **Division** in the Available Sorting Fields list box. Double-click on the field names **Department** and **Extension**.
- 3 Click on the **OK** command button to sort the database. The system will exit to the Billing Database with its records sorted accordingly.

Search (Find) To search for a specific record in the database, select Find from the Search cascading menu. Enter the search criteria for the desired record in the Search For fields and click on the **Include** check box for that field to turn it on (X). Click on the **OK** command button to search for the first record matching this criteria. If the system reaches the end of the database without finding a record with this criteria, it will prompt you with a message "Search field(s) not found."

You can also search for records based on minimum criteria. Use wildcards such as the asterisk '*' and question mark '?' to fill in the remaining values for specific search criteria.

If you are searching for records using only partial strings, then remember to enter these wildcard characters in the string (e.g., for a digit string that begins with '6161', enter: **6161*** in the search field).

The following example will demonstrate the use of this function.

To search for employees in departments beginning with 'L', click on the **Search** tool and perform the following steps.

- 1 Enter **L*** in the Department field of the Search dialog and click on the **OK** command button. The system will search for the first record containing 'L' as the first letter in the Department field.
- 2 Click on the **Find Next** tool to find the next instance of the record matching the current search criteria.

Replace Use the Replace function to search for a specific record matching a defined search criteria and replace it with another value. Select **Replace** from the Search cascading menu tool to access this database's editor dialog. Enter the search criteria in the Search For fields and enter the values with which you wish to replace them in the adjacent Replace By field. Click on the **Include** check box to turn it on (X) and click on the **OK** command button.

The following example demonstrates this function.

To change all the records containing the Programming department to Development, click on the **Replace** tool and perform the following steps.

- 1 In the Department Search For field, enter **PROGRAMMING**. In its Replace By field, enter **DEVELOPMENT**.
- 2 Click on its **Include** check box to turn it on (X).
- 3 Click on the **OK** command button. The system will search for the first record containing Programming in the Department field and replace it with Development.

Replace All: If you wish to replace all records which contain certain criteria, click on **Replace All**. This function will replace every record containing the search criteria without prompting for confirmation.

Prompt On Replace: Click on this check box to display the records on screen for your confirmation. To confirm the replace, click on the **Yes** command button.

Click on the **OK** command button to update the database.

Customer Directory

The Customer Directory is used to identify commonly called telephone numbers on the reports that are generated. It can also maintain a listing of your frequently called customers or clients. When the system matches a telephone number with a telephone number found in this directory, it prints the name corresponding to that telephone number in the Customer Name field on the report.

To access this directory, click on **Customer Directory** from the Database drop-down menu. As with the other databases, you can use the full range of database edit features.

To create a customer record, click on a record line in the grid and select **Insert** from the Edit drop-down menu. The Customer Directory editor dialog will appear.

Figure 14
Customer Directory window

The screenshot shows a window titled "Customer Directory" with a menu bar (Edit, Search, Help) and a toolbar with various icons. Below the toolbar is a table with the following data:

	Customer Name	Phone Number	Account Code	Comments
1	Alice Munro	214 555 9256		
2	Jan Bradel	214 555 1234	333	
3	Sindy Rawlings	214 555 5467	342	
	Robert James	214 555 3278	344	
5	Peter Mac	214 555 3290	345	
6	Mike Maloney	214 555 7868	355	
7	Carol Robertson	214 555 6789	367	
8	Greg Homes	214 555 6991	383	

At the bottom of the window, there is a status bar showing "Record : 4" and "Total : 8".

The following list defines the valid data for each field in the Customer Directory editor dialog.

Customer Name: This field is a 20 character alphanumeric field.

Comments: This field is a 20 character alphanumeric field. Enter the location of the customer or any other pertinent information in this field. This is used as an informational tool.

Phone Number: This field is a 20 digit alphanumeric field. This field can contain the wild card placeholder ? which matches any single digit. When the system processes a call on the Extension Detail Report, it searches (from right to left) through the Customer Directory to find a matching telephone number. This will interact with the Meridian 1 CDR where you can include digits outpulsed after the call is established (i.e., end-to-end signaling).

For example, a node has normal DDD, DID lines with access codes **9** and **82**, and a distribution center has the telephone number **(519) 555-3457**.

Enter the digits **5553457** in this field to match both telephone numbers. It will match any phone number with these last seven digits regardless of the area code or access code.

Account Code: This field is a 14 digit numeric field. Account codes are used in organizations that wish to identify calls placed on behalf of a client or project. When running an Account Code Report, the system matches this number to the Call Database to more clearly identify the account.

Once you have completed inserting the information for a customer, click on the **OK** command button to save it. The editor's screen will clear prompting you for the next customer record information. Once all the necessary records have been entered, click on the **Cancel** command button to close the editor dialog. The system will refresh the Customer Directory grid to contain all your new or modified records.

Billing Database

The Billing Database contains information which is generated from the Set Database and Custom Database of MAT Station Administration and provides information to the system for organizational purposes. Call Accounting uses the data entered in this database to accumulate and assign costs by extension, department, division, and for the organization as a whole.

When you access the Billing Database, the system will index the database to build the department and division files. It will not index these files after this initial access unless the department and division files change.

To access this directory, select **Billing Database** from the Database drop-down menu. The Billing Database browser dialog will appear with the full range of database edit features.

The View drop-down menu allows you to determine which type of database information will be displayed in this editor.

Select **Station** from the View drop-down menu to view records that were populated from the Set Database of MAT Station Administration.

Select **Custom** from the View drop-down menu to view records that were populated from the Custom Database of MAT Station Administration.

Select **Both** from the View drop-down menu to view records that were populated from both the Set Database and Custom Database.

Synchronization

When a site or the Billing Database Editor is opened, Call Accounting will check the state of the Billing Database against the MAT Station File. If the Billing Database is not in “sync” with the Station File (i.e., changes have been made in the MAT Station File that are not reflected in the Billing Database), then Call Accounting will prompt you to resynchronize the Billing Database. Click on Yes to synchronize.

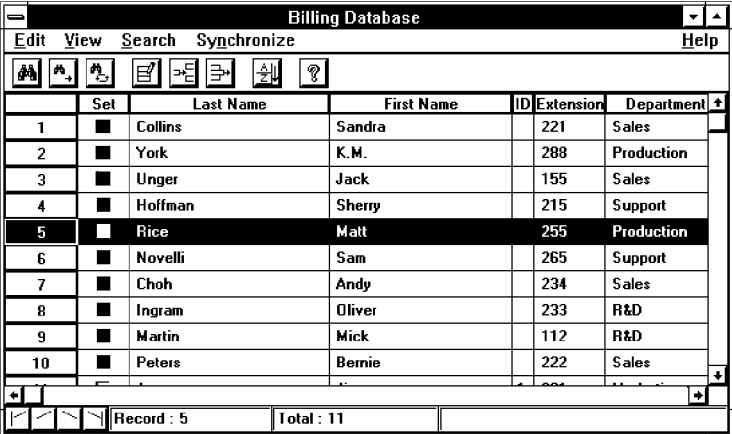
Alternatively, you can click on **Synchronize** from the menu bar to automatically update the Billing Database information with the MAT Station File regardless if the two files are in “sync”.

After the synchronization process, all Custom records (those records that the user enters directly into the Billing Database) are shifted to beginning of the Billing Database Editor. All Set records (those records that were obtained from the Set Database of MAT Station Administration) are shifted to the end of the Billing Database Editor.

Note 1: Synchronization is not performed when running reports.

Note 2: All set records cannot be modified through the Billing Database. Any changes must be done through MAT Station Administration.

Figure 15
Billing Database window



	Set	Last Name	First Name	ID	Extension	Department
1	☒	Collins	Sandra		221	Sales
2	☒	York	K.M.		288	Production
3	☒	Unger	Jack		155	Sales
4	☒	Hoffman	Sherry		215	Support
5	☐	Rice	Matt		255	Production
6	☒	Novelli	Sam		265	Support
7	☒	Choh	Andy		234	Sales
8	☒	Ingram	Oliver		233	R&D
9	☒	Martin	Mick		112	R&D
10	☒	Peters	Bernie		222	Sales

Record : 5 Total : 11

To create an employee record, click on a record line in the grid and select **Insert** from the Edit drop-down menu. Enter the following information for each record in this directory.

Set: If this check box is turned on (X), it identifies that this record was obtained from the Set Database of MAT Station Administration. This is a read-only record and cannot be modified from Call Accounting.

Last Name: The Last Name field is a 20 character alphanumeric field. This field should contain the surname of the person who is stationed at the extension number entered in the Extension field. The system treats this field as an information field.

First Name: The First Name field is a 10 character alphanumeric field. Enter the first name of the person who is stationed at the extension number which you entered in the Extension field. The system treats this field as an information field.

Department: The Department field is a 20 character alphanumeric drop-down combo-box. The system uses this field to identify the department of the individual who is stationed at the extension number. This field also lists total calls and costs for a department on the Department Summary Report. You can enter a department name in this field or click on the drop-down command to view the list of available departments.

Cost ID: Enter 1 in this field if this employee is the primary user of a shared extension. All call charges will be assigned to that employee. Enter 2 or greater for all secondary users of the extension. The system assigns equipment charges to all employees regardless of the number entered.

The ID field also provides information regarding an entry. A T in this field indicates that the Extension field is not an extension number but the trunk number of a trunk line. This feature is particularly useful in two situations:

- Nodes in a tie line network; the node is the tandem point for calls placed within the network.
- Nodes offering Direct Inward Service Access (DISA).

Call Accounting reports on all calls that have originated on this trunk and then have gone on to use another service within the Meridian 1. For example, a call comes in on the tie line from the Branch office and then uses combination trunk lines to go outside of the office.

Call Accounting can also accumulate total call volumes and costs for an off-net location by treating the location as a unique department in the organization.

Extension: The Extension field is the key field in this database. This field links the information in the Billing Database with the data stored in the Call Database. When the system processes the Extension Detail Report, it reads the Extension field to determine which extensions' calls should be processed. When the system runs its reports, it bills the costs associated with this specific extension to the appropriate person, department, and division at this extension.

If you duplicate the value of the Extension field in this directory, Call Accounting will only process the first entry that it encounters. This avoids having calls double-billed within a report.

Division: The Division field is a 10 character alphanumeric drop-down combo-box. As with the Department field, you can enter your division or select from one in the list box. The division provides the next level of cost breakdown in the accounting structure.

Billing Auth Code: The Billing Auth Code field is a 10 digit numeric field. This feature allows you to bill back to a particular extension by using the authorization code feature of the Meridian 1 regardless of the extension from which the call was placed.

Equipment Cost: Enter a fixed monthly cost to be charged to this extension for any equipment which is assigned to it. The system charges this cost on the reports whether or not any calls were placed by this extension. The maximum allowable charge is 9999.99.

Once you have completed entering the information in an record, click on the **OK** command button to save it. If you are inserting a record, the editor's screen will clear prompting you for the next employee's record information. Once all the necessary records have been entered, click on the **Cancel** command button to close the editor dialog. The system will refresh the Billing Database grid to contain all your new or modified employee records.

Backup All Databases

If you need to make a backup copy of some or all of the database files, use the Backup All Databases function. The backup command will save the data files specified for the current site.

Note: This will only make a backup copy of the Call Accounting database files. If you wish to backup other MAT system files, then use the application to which the database files belong or use the MAT Site Configuration application.

To run the Backup procedure, click on **Backup All Databases** from the Database drop-down menu. Select the drive and directory by typing them into the Destination Directories field and click on the **OK** command button. The Backup All Databases dialog will appear listing the database descriptions, source filenames, and backup filenames for the current site.

Table 37
Database descriptions

Database	Description
System Options	General system parameters
Telephone Configuration	Telephone configuration information
Location Book Registry	Contains defined location books
Carrier Pricing Templates	Carrier pricing definitions
Communications Database	Communications Database file
Billing Database	Employee and extension information
Customer Directory	Customer name and account information
Call Detail File	CDR detail data, if any
Call Database	CDR data using Index file
Index File	Used to trace through Call Database
Select Report Filters	Report filter information
Summary File	CDR summary information file
Auto Backup	Used if auto backup is turned on
Other Billable Items	Additional costs not associated with calls
Report File	Output sent to disk
—end—	

To make a backup copy of a specific file, turn on (X) the Include check box for that site. If you wish to make backup copies of all of the files, click on **Include All**. To exclude all the files, click on **Exclude All**.

Confirm Overwrites: Turn this check box on (X) if you wish a confirmation prompt to appear before the system replaces any files existing on the diskette with the same filename as those you are backing up.

Variable Rates Table

To make backup copies of any Variable Rate Files, Dial Codes, Charge Bands, or Time Bands, click on **Variable Rates File**. A dialog will appear listing the various rate filenames. To make a backup copy of a specific file, turn on (X) the Include check box for that site. To make backup copies all of the files, click on **Include All**. To exclude all the files, click on **Exclude All**.

International Rates: Click on **International Rates** to make backup copies of any International Rates files. To make backup copies all of the files, click on **Include All**. To exclude all the files, click on **Exclude All**.

Holiday File: Click on **Holiday File** to make backup copies of any Holiday Files. To make backup copies all of the files, click on **Include All**. To exclude all the files, click on **Exclude All**.

Click on the **OK** command button to initiate the backup procedure and return to the Backup All Databases dialog.

Location Books: To make backup copies of any Location Book files, click on the **Location Books** command button. A dialog will appear listing the various Location Book filenames. To make a backup copy of a specific file, turn on (X) the Include check box for that site. If you wish to make backup copies of all of the files, click on **Include All**. If you wish to exclude all the files, click on **Exclude All**. Click on the **OK** command button to initiate the backup procedure and return you to the Backup All Databases dialog.

Backing up to Floppy Diskettes

If you are backing up to a floppy drive, insert the diskettes as the system prompts you. This function provides you with two additional options.

- Delete Existing Files On Floppy
- Confirm Deletes

Delete Existing Files On Floppy: Turn this check box on (X) if you wish to delete all the files from the current disk that you are backing your files onto.

Confirm Deletes: If the Delete Existing Files On Floppy check box is turned on (X), then turn this check box on (X) for the system to prompt for confirmation.

Note: Ensure that you label the destination diskettes correctly. When you restore the files, the system will not allow you to restore the files if the diskettes are out of order.

When you are ready to make backup copies of your files, click on the **OK** command button.

Restore All Databases

The Restore function allows you to restore any backup data by copying the Call Accounting database files you had previously backed up to the current databases.

To restore the files you saved using the Backup All Databases function, select **Restore All Databases** from the Database drop-down menu. A dialog will appear prompting you to enter the drive and directory from which you wish to restore the files (i.e., A:). Enter this information and click on the **OK** command button.

To restore a specific file, turn on (X) the Include check box for that site. If you wish to restore all of the files, click on **Include All**. If you wish to exclude all the files, then click on **Exclude All**.

Confirm Overwrites: Turn this check box on (X) if you wish a confirmation prompt to appear before the system replaces any files existing on the diskette with the same filename as those you are restoring.

Variable Rates Table

To restore any Variable Rate Files, Dial Codes, Charge Bands, or Time Bands, click on the **Variable Rates File** command button. A dialog will appear listing the various rate filenames. To restore a specific file, turn on (X) the Include check box for that site. To restore all of the files, click on the **Include All** command button. To exclude all the files, click on the **Exclude All** command button.

International Rates: Click on this command button to restore any backed up International Rates Files. To restore all of the files, click on the **Include All** command button. To exclude all the files, click on the **Exclude All** command button.

Holiday File: Click on this command button to restore any backed up Holiday Files. To restore all of the files, click on the **Include All** command button. To exclude all the files, click on the **Exclude All** command button.

Location Books: To restore any Location Book files, click on the **Location Books** command button. A dialog will appear listing the various Location Book filenames. To restore a specific file, turn on (X) the Include check box for that site. If you wish to restore all of the files, click on the **Include All** command button. If you wish to exclude all the files, click on the **Exclude All** command button. Click on the **OK** command button to initiate the restore procedure and return you to the Restore All Databases dialog.

Click on the **OK** command button to restore your files.

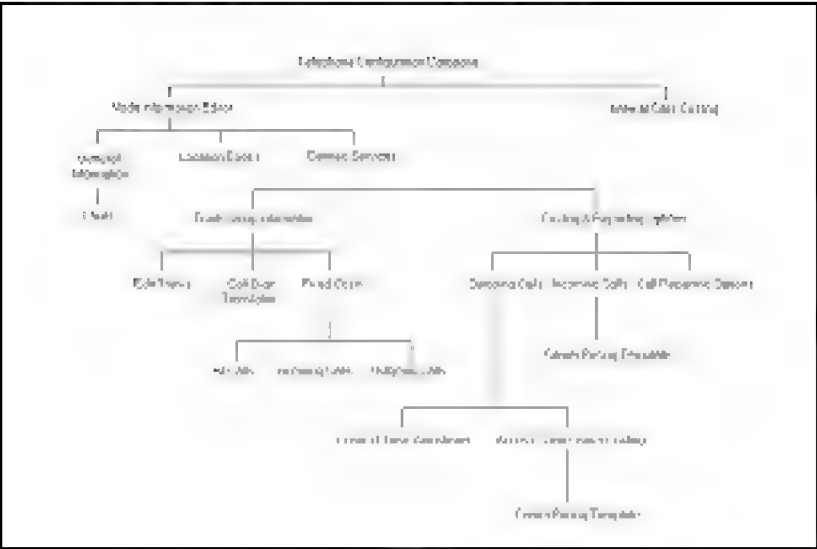
Telephone Configuration Database

The Telephone Configuration Database is the key to pricing calls and tracing them to their destinations. It defines the type of costing used through each trunk (e.g., DDD, DID, Tie Line) and includes any additional costs defined for your system and location. Each defined service uses predefined location books and rate tables based on the offerings of your telecommunications carrier. Call Accounting can then use this telephone configuration information to properly cost the call records collected from the Meridian 1 and generate reports.

It is critical that you keep the Telephone Configuration Database up-to-date as changes occur in your telephone system. Pay particular attention to the number of trunk lines used in your system and the free local calling areas. If these free local calling exchanges are not updated, then local calls may be priced as long distance calls.

The following is a schematic of the Telephone Configuration Database menus as they are accessed from the main window.

Figure 16
Schematic of Telephone Configuration Database



To access the Telephone Configuration Database, click on **Telephone Configuration** from the Database drop-down menu. The following sections will describe a each feature of the Telephone Configuration as it appears in the menu.

Node Information Editor

You must define the costing for each node on your network. Each line in this grid represents an individual node. If you have only one site, then you only need to define one node. Otherwise, you must define each node's configuration (e.g., home, office, plants, etc.). For each node that is added to this list, you can enter its general description, location book, name, dial code, and trunks.

Figure 17
Node Information Editor

Node Information

General Information

Company Name: ACME Company

Company Location: New York, New York

☒ Main Node +/- Time Zone: 0 Currency Exchange: 1 Taxes

Location Book

Location Book Name: North American VH table Dial Code/NPANXX: 212221

Defined Services

Edit Add Delete

	Trunk Group/Service ID	Description
1	NDDD	New York Long Distance
2	NLDC	New York Local Calls
3	DTIE	Tie Group Trunks to Dallas

Close Help

This dialog contains standard editing features where you can add, delete, and edit any of the records.

To add a node to this database, click on the **Add** command button. Once you have selected a node record in the grid, enter its information in the following fields.

Company Name: Enter the name of your organization (maximum of 20 characters) for this node. If your configuration uses multiple nodes, then enter a name in this field to distinguish it from the other nodes.

Company Location: Enter the location of this node (maximum of 20 characters) for your company. This further distinguishes this node from any other nodes in your configuration.

Main Node: If enabled, this check box identifies this node is the main node for your configuration. The Telephone Configuration Database requires one main node to cost calls.

+/- Time Zone: Enter the time zone difference in hours between this node and the main node. For example, if the main node is in New York and this node is in Los Angeles, then enter -3 in this field. If this is the main node, this field will be grayed out.

Currency Exchange: Enter the exchange rate for this node's costing. All costing will be defined based on the home node's currency. For example, if the home node is located in USA, then the currency exchange will be calculated according to U.S. dollars. If this is the main node, this field will be grayed out.

Taxes

Click on this command button to define the taxes which will be added to the rate values of this node. The Tax Information dialog will appear allowing you to enter up to five different tax schemes for this node. Enter the following information for each tax.

Include: Turn on this check box (X) to include this tax in this node's costing.

Tax Name: Enter a name or description (maximum 12 characters) of this tax.

Amount: Enter the tax rate as a percentage value (e.g., 7.0 for a 7% tax rate).

Compounding: If you wish to compound this tax with another tax in this dialog, click on this check box. The Compound Table is used to determine which taxes, if any, the system should calculate.

For example, if you wish to add a 7% and then compound an 8% tax to this node, then enter the data as in the following diagram.

Figure 18
Tax Setup dialog

Include	Tax Name	Amount	Compounding
☒	Federal tax	7.0	1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐
☒	State tax	8.0	1. ☒ 2. ☐ 3. ☐ 4. ☐ 5. ☐
☐			1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐
☐			1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐
☐			1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐

OK Cancel Help

Leave the remaining fields in this dialog blank. In the above example, the Federal tax is calculated first. The State tax is calculated after the Federal tax has been added to the cost of the call. This is because the enabled check box in row 2 tells the system to compound this tax on top of tax 1. The total cost is the result of first applying tax 1 (7%) to the cost of the call, adding this amount to the cost, applying tax 2 (8%) to this total, and then adding this amount to total cost.

Note: These schemes will be the same for the entire configuration; not just one node. Alternate tax combinations can be configured for separate nodes. Once set up, all taxes will be added onto each call as well as in summary lines at the end of the reports.

Once you have entered the tax information in this dialog, click on the OK command button.

Location Book

The Location Book contains the method which is used to calculate the distances between locations for DDD/DID costing. In North America, V&H coordinate tables are used to measure distances between area code/exchange nodes.

Location Book Name: From this drop-down list box, select the location book you require.

Dial Code/NPANXX: Enter the dial code for this node. This is used to identify into which charge band a particular call is to be placed.

Defined Services

The remainder of the grid contains a list of this node’s defined trunks and services. Each node will have at least one trunk which connects the Meridian 1 to an external source. Use the standard editing commands to add, edit, and delete a defined trunk.

Click on the **Add** command button to add a trunk group and enter its information in the following fields:

Figure 19
Trunk Group Service Definition

The screenshot shows a dialog box titled "Trunk Group Service Definition - ACME Company". It is divided into two main sections. The top section, "Trunk Group Information", contains a text field for "Trunk Group/Service ID" with an "Edit Trunks" button to its right, a "Call Digit Translation" button to the right of the ID field, a "Description" text field, and a "Fixed Costs" button to the right of the description field. The bottom section, "Costing and Reporting Options", contains three buttons: "Outgoing Calls", "Incoming Calls", and "Call Reporting Options". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Trunk Group/Service ID: This field identifies a single trunk or a group of trunks with common costing and reporting attributes. Enter the name of this trunk group (maximum of five characters).

Edit Trunks If you wish to edit a trunk or trunk group for this service, click on the **Edit Trunks** command button.

The following example lists a trunk number as it is output from the Meridian 1 and the Call Detail Database.

Example CDR record 1

Route	000
Member	001
Meridian 1 output	T000001
Call Detail Database output	T000001*
Configuration input	1001

Example CDR record 2

Route	002
Member	001
Meridian 1 output	T002001
Call Detail Database output	T002001*
Configuration input	2001

* A leading zero is inserted in order to make the trunk number 7 digits.

To add a trunk number, click on the **Add** command button and enter the following information in the fields of each record.

Low Range: Enter the first trunk number (lowest number) in this trunk group (maximum of seven digits).

High Range: Enter the last trunk number (highest number) in this trunk group (maximum of seven digits). If you are only defining one trunk, then enter the same trunk number for the High Range as entered in the Low Range.

Line/Description: Enter a description of this trunk group for informational purposes only.

Repeat the above for each trunk group selected for this service. Once you have entered the trunk groups, click on the **OK** command button to save this information and click on the **Close** command button to exit to the Trunk Group Service Definition dialog.

Description: Enter a description of this trunk group to identify its attributes. This is used for informational purposes only.

Call Digit Translation: Call Digit Translation is used to translate the dialed digits from one pattern to another for costing purposes. For example, '9 1 214 455-1234' could be translated to '9 1 713 455-1234'. Use this function to translate the digits dialed which may have been previously removed by the System Call Digit Translation function. This function is similar to the System Call Digit Translation function, except that it translates the digits dialed on a trunk group by trunk group basis; not the whole site.

To enter the call digit translation for this trunk group, click on the **Call Digit Translation** command button. In the Call Digit Translation dialog which appears, click on the **Add** command button. This will access another dialog in which you can enter these translations. The following criteria apply.

Search Digits: This field indicates the digit pattern to be translated (it must include the access code). The Search Digits must match the actual digits dialed or the digits as translated by the System Call Digit translation function. This field can also contain control and format characters ('@', '%', '?', and '*') which identify how to format the digits on reports. The following table outlines their function.

Table 38
Control character functions

Control Character	Function
%	Place holder for Search Digits and Replace Digits fields (e.g., digit at first % position in Search Digits field is replaced at first % position in Replace Digits field)
?	Wild card character representing one digit in Search Digits field
*	Wild card character representing multiple digits in Search Digits field (including no digits)
@	Adds spaces to the digit when output on reports
—end—	

Replace Digits: This field defines the digits as they are to be interpreted and costed. The system will cost the call as if the Replace Digits were dialed instead of the Search Digits but will print the Search Digits on the reports.

Location: This field defines the location of the terminating point of a call. If you leave this field blank, the system will just use the location books to determine the location of a call. Otherwise, it will override the location book lookup with the value in this field.

The following examples demonstrate the use of this call digit translation function. There are two possible scenarios when entering call digit translations.

Scenario 1: If you wish to have the Replace Digits pattern printed on reports instead of the dialed digit pattern, place a hyphen (-) at the first position of the Replace Digits string. In this case, the information in the Call Digit Translation record will override any formatting controls in the Carrier Pricing Template.

To format using the Call Digit Translation function, place the formatting characters in the Search Digits field. This field accepts the characters '@' for a space and '-' for a hyphen.

The following examples demonstrates this function.

Example 1

Search Digits: **9@713@% % %- % % % ***

Replace Digits: **-9713% % % % % % %**

Result: Processes only '9713' + the next 7 digits (e.g., it prints 9 713 123-4567).

Example 2

Search Digits: **9@555-% % % % ***

Replace Digits: **-9555% % % %**

Result: Processes only '9555' + the next 4 digits (e.g., it prints 9 555-1234).

Scenario 2: If you do not wish to have the Replace Digits pattern printed on reports, do not enter the hyphen at the first position of the Replace Digits string and do not enter any formatting characters in the Search Digits field. In this case, report formatting is controlled by the Carrier Pricing Template.

Example 1

Search Digits: **912146551234**

Replace Digits: **917136551234**

Result: Processes '917136551234' but prints '912146551234' (with formatting set by Carrier Pricing Template)

Example 2

Search Digits: **912146551234**

Replace Digits: **812146551234**

Result: Processes '812146551234' but prints '912146551234' (with formatting set by Carrier Pricing Template)

Once you have entered this criteria, click on the **OK** command button to save it and exit to the Trunk Group Service Definition dialog.

Fixed Costs: To enter the fixed costs for these trunks, click on the **Fixed Costs** command button. Its dialog represents the basic costs applied to the trunks in this trunk group and can represent any specific costs which may be applied to incoming and outgoing calls. For example, monthly rental charges and leased line costs can be entered here as fixed costs.

Figure 20
Fixed Costs dialog

Fixed Costs - Acme Company Ltd.

All Calls

Cost Per Minute: Cost Per Call:
 Cost Per Pulse: Cost Per Month:

Incoming Calls

Cost Per Minute: Cost Per Call:
 Cost Per Pulse: Cost Per Month:

Outgoing Calls

Cost Per Month:

	Digits	Comment	Cost per Minute	Cost per Call	Cost per Pulse

Enter the following information in the fields of this dialog.

All Calls: Enter any additional costs that will apply to this node in the following fields: Cost per Minute; Cost per Call; Cost per Pulse; and Cost per Month.

Incoming Calls: Enter any additional costs that will apply to incoming calls in the following fields: Cost per Minute; Cost per Call; Cost per Pulse; and Cost per Month.

Note: The costs entered in these fields will be applied *after* the costs listed in the All Calls fields have been applied.

Outgoing Calls: Enter the costs for the outgoing calls which match the digit criteria by clicking on the **Add** or **Insert** command buttons. To insert a new record below the highlighted record, click on the **Add** command button. To insert a new record above the highlighted record, click on the **Insert** command button.

Cost per Month: Enter the cost per month that applies to this trunk group service.

In the Outgoing Calls dialog which appears, type in the following information.

Digits: Enter the digit criteria for this costing structure. Any outgoing calls matching this criteria will have additional costs applied to them. Use the asterisk (*) and question mark (?) as wildcards when entering this criteria. The asterisk represents multiple digits and the question mark is a placeholder that represents a single digit. Use the optional flags {} (curled brackets) to select optional digits to be included in the digits dialed. This represents digits which may or may not be present.

Comments: Enter a description of this type of outgoing call.

Cost per Minute/Call/Pulse: Enter the fixed costs for each type of outgoing call as a cost per minute, call, or metered pulse.

Note: The costs entered in these fields will be applied after the costs listed in the All Calls fields have been applied.

Once you have entered the fixed costs in this dialog, click on the **OK** command button and then the **Close** command button to save this information and exit to the Trunk Group Service Definition dialog.

Costing and Reporting Options

Once you have entered the trunk information and fixed costs for this service, you can then assign the rate tables and specify any additional reporting options.

Outgoing Calls: Click on **Outgoing Calls** to select the rates for specific outgoing calls using this service. Enter the outgoing calls costing information in the following sections.

Figure 21
Outgoing Calls window

Outgoing Calls Costing - ACME Company

Connect Time Adjustment

Add Insert Edit Delete

	Digits	Comments	Minimum Call Duration	Connect Time

Access Code Carrier Costing

Add Insert Edit Delete

	Access Code	Carrier Pricing Template	Cost Adjustment (%)

Close Help

Connect Time Adjustment

This grid displays the time in seconds that need to be adjusted for any connection delays. Click on the **Add** or **Insert** command buttons and enter the following information.

Digits: Enter the digits dialed for the outgoing calls which will use this rate (maximum of 100 characters). Use the asterisk (*) and question mark (?) as wildcards to allow for definitions of multiple outgoing calls. Use the optional flags {} (curled brackets) to select optional digits to be included in the digits dialed (digits which may or may not be present). You can enter multiple digits dialed by separating each series of digits with a semi-colon (;).

For example, if you wish to select digits for all outgoing calls to the 416 area code, then enter **1416*;416*** in this field.

Comments: Enter a description of the outgoing calls being defined. This is used for informational purposes only.

Minimum Call Duration: Use this field to eliminate the reporting of calls which are very short in duration such as misdialed calls or busy signals. Enter the minimum duration (in seconds) for a call using this service. If the system encounters a call with a duration of less than this value, the call will not appear on the reports.

Connect Time: The system subtracts the connect time entered in this field from the call duration in order to produce an accurate chargeable duration. Enter this value in seconds.

Click on the **OK** command button and then the **Close** command button to save this information and exit to the Trunk Group Service Definition dialog.

Access Code Carrier Costing

Use this grid to enter multiple carrier costing tables for specific access codes and any additional cost adjustments and the type of service being defined.

Click on the **Add** or **Insert** command buttons and enter the following informations.

Figure 22
Access Code Carrier Costing dialog

The image shows a software dialog box titled "Access Code Carrier Costing - ACME Company". It contains several input fields and buttons. At the top, there are two text boxes: "Access Code" and "Cost Adjustment (%)". Below these is a "Connection Type" section with two radio buttons: "Direct" (which is selected) and "Tie/FX Line". Underneath, there are two main sections. The "Carrier Pricing Definition" section on the left includes an "Edit" button and a "Carrier Pricing Template" dropdown menu currently set to "[None]". The "Tie/FX Information" section on the right includes a "Tie Node Location" dropdown menu also set to "[None]". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Access Code: Enter the access code for the trunks which use this service. This Carrier Pricing Template will then apply to trunks which have this access code.

Note: Do not enter an access code if the access code is being taken out by the Call Digit Translation function.

Cost Adjustment (%): Enter any additional cost adjustments which will be made to the rates (e.g. 7.0 for a 7% adjust rate).

Connection Type: Select the type of trunk in this trunk group from the following by clicking on the specific option button.

Direct: This represents a DDD/DID trunk and is used for direct long distance costing. From the Carrier Pricing Template drop-down list box, select the table as defined in the Carrier Pricing Template function. These outgoing calls will use the rates defined in this carrier pricing template.

Edit: Click on the **Edit** command button to access the Carrier Pricing Template function and modify its costing table.

Tie/FX Line: This represents a direct or virtual tie line to another node. If you select this option, you can select its tie node location by selecting the tie node in the Tie Node Location drop-down list box (if you have previously defined another node).

Once you have entered the rate information, click on the **OK** command button and then the **Close** command button to save it and return to the Outgoing Calls dialog.

Repeat these steps for each record you wish to add to the Access Code Carrier Costing grid. Once you have entered the information for these outgoing calls, click on the **Close** command button and exit to the Trunk Group Service Definition dialog.

Incoming Calls

To enter any costs for incoming calls using this service, click on the **Incoming Calls** command button and enter this costing information in the following fields.

Cost Adjustment (%): Enter any additional cost adjustments which will be made to the rates of this carrier pricing template (e.g. 7.0 for a 7% adjust rate).

Connection Type: Select the type of trunk in this trunk group from the following by clicking on the specific option button.

Direct: This represents a DDD/DID trunk and is used for direct long distance costing. From the Carrier Pricing Template drop-down list box, select the table as defined in the Carrier Pricing Template function. These incoming calls will use the rates defined in this carrier pricing template.

Edit: Click on the **Edit** command button to access the Carrier Pricing Template function and modify this costing table.

Tie/FX Line: This represents a direct or virtual tie line to another node. If you select this option, you can select its tie node location by selecting the tie node in the Tie Node Location drop-down list box (if you have previously defined another node).

Once you have entered the rate information for incoming calls, click on the **Close** command button to save it and return to the Trunk Group Service Definition dialog.

Call Reporting Options

Use the Call Reporting Options function to select reporting options for this service. This includes such options as suppressing the output for calls using this service and assigning call fields on reports. Unlike the main Reporting Options function which allows you to define global reporting options, the Call Reporting Options function allows you to select the reporting options for a specific service.

Click on the **Call Reporting Options** command button in the Trunk Group Service Definition dialog and click on the **Add** or **Insert** command buttons. Enter the appropriate information in the following fields.

Figure 23
Call Reporting Options window

Call Reporting Options - ACME Company

Add Insert Edit Delete

Call Type	Print Option	Cost Field	Route DES	Digits Mask

Close Help

Call Type: Each record in this grid can be used to define the reporting options for each type of call. These call types must have previously been defined using the Call Type Definition function. From this drop-down list box, select the type of call which will use these reporting options.

Print Option: From this drop-down list box, select the type of output for these calls from the following options:

Suppress: This option suppresses the output of the calls matching this call type for this service. These calls will not appear on the detail or summary reports.

Detail: This option allows this call type to be printed on detail and summary reports.

Summary: This option allows this call type to be printed only on summary portions of reports.

Cost Field: From this drop-down list box, select the cost field which matches the value in the Cost Field of the Reporting Options function. These fields represent the headings for the summary section of the detail reports and the summary reports.

Route DES: You can assign a unique route designator for calls to distinguish them from other calls. Enter a three character route designator which will appear beside the calls on detail reports.

Digits Mask: If you wish to suppress the last digits of your calls (for privacy/security reasons), then enter the number of digits in this field. For example, if you wish to suppress the last four digits dialed for this call type, enter **4** in this field.

Click on the **OK** command button and then the **Close** command button to save this information and exit to the Trunk Group Service Definition dialog.

Once you have entered all of the information for this service, click on the **OK** command button from the Trunk Group Service Definition dialog to save these changes and exit to the Node Information dialog. Click on the **OK** command button again to exit to the Telephone Configuration dialog.

Internal Calls Costing

The Internal Calls Costing function allows you to apply costs to calls made within a site. These internal calls are made in the Meridian 1 from station to station. If you wish to calculate a cost for your company's internal calls, and if the main node produces records for such calls, then use this function to enter these costs.

To access this function, click on the **Internal Calls Costing** command button from the Telephone Configuration editor. Enter the following information in the fields of this dialog.

Figure 24
Internal Calls Costing dialog

Internal Calls Costing	
Initial	Additional
1	1
Cost Per Minute	Cost Per Call
0.00	0.00
Route DES	Cost Field
INT	NLOCAL ▾
☒ Process Incoming	Print Option
	Suppress ▾
OK Cancel Help	

Initial: Enter the duration in seconds for the initial price period for an internal call. This is the lowest possible duration for a call in seconds. Any internal calls that have a duration less than this period will be costed as if the duration of the call was equal to the initial price period.

For example, if you enter an initial price period of 30, then all internal calls will be costed as having a minimum duration of 30 seconds. Normally this field is set to 1.

Additional: Enter the duration in seconds of all additional price periods. This value represents the period in seconds which the system uses to determine the length of the call.

For example, if the initial price period is 30 seconds and the additional price period is 6 seconds, then a 33 second call will be costed as a 36 second call; whereas a 37 second call will be costed as a 42 second call. The initial and additional price periods are useful in setting up rounding factors when determining the costs for internal calls. Normally this field is set to 1.

Cost per Minute: Enter the pricing to be applied to each internal call per minute.

Cost per Call: Enter the pricing to be applied as a flat rate for each internal call.

If both fields contain pricing amounts, then the Cost per Minute is multiplied by the duration of the call (in minutes) and then added to the Cost per Call.

Route DES: You can assign a unique route designator to all internal calls to distinguish them from other calls. Enter a three character route designator which will appear beside the calls on detail reports.

Cost Field: The value in the Cost Field drop-down list box refers to one of the six Cost Summary fields listed in the Reporting Options dialog. To assign the cost of the internal calls to one of these cost fields, select the cost summary field from this drop-down list box. You can leave this field blank if the cost is not to be allocated to any field.

Process Incoming: If you turn this check box on (X), internal calls will appear twice on reports, once as an outgoing call and once as an incoming call. Turn this check box off (blank field) to prevent this double counting and billing. The incoming call duration is not included when the system calculates the prorated monthly cost for trunks.

Print Option: From this drop-down list box, select the type of output for these calls from the following options.

Suppress: Select this option to suppress the output of the calls matching this call type for this service and will not appear on the detail or summary reports.

Detail: Select this option to allow this call type to be printed only on detail and summary lines of a report.

Summary: Select this option to allow this call type to be printed only on summary lines of a report.

Once you have entered the incoming calls information, click on the **OK** command button to save it and exit to the Telephone Configuration Database main window.

Click on the **OK** command button again to exit to the Call Accounting main menu.

System Call Digit Translation

The System Call Digit Translation function allows you to translate the digits dialed on call records for all trunk groups in this site. This allows the system to process and print a different pattern from the one that is actually dialed. For example, the digit pattern '917135551234' could be re-interpreted as '812145551234'.

Note: Call Digit Translation does not affect CLID/ANI digit patterns on incoming calls.

The System Call Digit Translation function translates the digits dialed in all of the call records in this site prior to the trunk group Call Digit Translation function.

Note: The digit pattern translated by the System Call Digit Translation function may be translated again using the trunk based Call Digit Translation function. You should therefore be careful when using this function.

To access this dialog, select **System Call Digit Translation** from the Database drop-down menu. The System Call Digit Translation dialog will appear containing a grid of records in which you can specify the translation criteria. To enter this criteria, click on the **Add** or **Insert** command buttons. An edit box will appear prompting you to enter the search and replace digits.

Search Digits: In this field, enter the digits to be translated including the access code. The system will match this field against the digits dialed field of all calls.

Replace Digits: In this field, enter the digits as they are to be interpreted. This can contain the access code as well as the digits and must not contain any formatting characters. The system will cost and print the calls as if the Replace Digits were dialed instead of the true digits (Search Digits).

Wild Cards: When entering the digits in the Search Digits and Replace Digits fields, you can enter the following wild card characters.

Asterisk (*): This wild card represents any number of digits. For example, the digits '91*' will match calls of any length that start with '91'.

Question Mark (?): This wild card represents a single digit in the call record. For example, '91?' will match only calls with 3 digits that start with '91'.

Per Cent (%): This is used as a digit placeholder from the Search Digits to the Replace Digits field. The character found at the initial '%' under Search Digits is positioned as the first '%' under Replace Digit, the character found at the second '%' under Search Digits is positioned as the second '%' under Replace Digits, and so on. For example, 91%%% in the Search Digits field and 8123%%% in the Replace Digits field will insert '8123' in place of '91' keeping the following three digits in place.

Once you have entered the Search and Replace Digits, click on the **OK** command button. This will return you to the System Call Digit Translation grid. Continue this step to enter any additional translations. To save this information and exit to the main window, click on the **OK** command button from the System Call Digit Translation dialog.

Utilities

The Call Accounting database utilities provide added commands which will assist you in managing your Call Database and help in system diagnostics.

To access these functions, click on **Utilities** from the Database drop-down menu and click on the desired function name in its cascading menu.

Call Database

The Call Database editor allows you to display and edit the Call Database records. In some cases, it may be necessary to edit or delete some call records of this database due to corrupted dates or IDs. This allows you to remove bad or unwanted sections of the database or replace invalid dates with valid dates.

To access the Call Database browser window, click on **Call Database** from the Utilities cascading menu. The following window will appear listing the call records of the currently retrieved Call Database file (MDR1.DAT).

Figure 25
Call Database window

Call Database						
Edit Search Maintenance						Help
	Orig. ID	Term. ID	Date (MM/DD)	Time (HH:MM)	Duration (HH:MM:SS)	Digits
1	D0007004	T0009002	06/01	09:21	00:00:42	4918005551234
2	T0007001	D0002229	06/01	09:43	00:10:04	
3	D0004000	T0008001	06/01	09:53	00:00:53	95551234
4	D0005871	T0008002	06/01	09:59	00:01:14	91905551111
5	T0007001	D0005809	06/01	10:05	00:02:59	
6	D0002229	T0008005	06/01	10:07	00:00:29	99055552222
7	D0002229	T0009001	06/01	10:23	00:00:18	495555555
8	D0002285	T0008001	06/01	10:24	00:00:11	918005551234
9	D0005005	T0008002	06/01	10:37	00:01:37	99055550000
10	D0004000	T0008003	06/01	10:42	00:00:51	95554321
11	D0002229	T0009002	06/01	12:12	00:00:27	48145556666
12	D0004001	T0008007	06/01	12:21	00:00:42	918007592243
Record : 5 Total : 254						

This window contains a grid which consists of menu commands, field headers, and a line-by-line listing of the call records. Each field in the record line represents the components of the call record.

To edit these records, click on the field for the record and type in the new information over the old text. Each record will contain data in the following fields.

Originating ID: The Originating ID field contains the call record's originating ID. The first character contains the designator for this ID where: D = DN or extension, T = trunk, and A = attendant.

Terminating ID: The Terminating ID field contains the call record's terminating ID. The first character contains the designator for this ID where: D = DN or extension, T = trunk, and A = attendant.

Date: The Date field contains the call record's date (mm/dd).

Time: The Time field contains the call record's time of day in 24 hour format (hh/mm).

Pulses: The Pulses field contains the number of metered pulses that this call record produced (if applicable).

Duration: The Duration field contains the call record's duration (hh/mm/ss).

Digits: The Digits field contains the call record's digits dialed.

Account Code: The Account Code field contains an optional account code for the call record.

Authorization Code: This field contains an optional authorization code for this call record.

CLID/ANI: This field contains the incoming ID for this call record.

Ring Time: This field contains the call record's ring time (if applicable).

Hold Time: The Hold Time field contains the number of seconds that this call record was placed on hold (if applicable).

Note: This output will depend on your switch type.

Use the following editor commands to edit these records.

Edit Functions

Modify To edit a record from this database, click on the record line (record number at the left margin of the list) to highlight it and click on **Modify** from the Edit drop-down menu. A dialog will appear prompting you to type over the fields you wish to correct. Once you have edited this record, click on the **OK** command button.

Delete To delete a record from this database, click on the record line to highlight it and click on **Delete** from the Edit drop-down menu.

Delete Range If you wish to delete a range of records, click on **Delete Range** from the Edit drop-down menu. A dialog will appear prompting you to enter the record numbers of the call records in the From and To range. Click on the **OK** command button and then click on the **Cancel** command button.

UnDelete To restore (undelete) a record or range of records, click on **UnDelete** from the Edit drop-down menu immediately after you deleted the range of records.

Sort Use the Sort function to sort the records of the Call Database by their contents. To sort the database by date and time, click on the **Sort** command. A dialog will appear prompting you to **Sort By Date and Time?**. Click on the **Yes** command button to verify this statement. Call Accounting will then sort the Call Database.

Close To exit the call database, click on the **Close** command.

Search functions

Goto Use the Goto command to quickly point to a record in this database. To access a record, click on Goto from the Search drop-down menu and enter the record number you wish to find. The editor will then highlight that record in the database list.

Find Use the Find command to search for a specific record in the database using specific search criteria. To search for a record, click on **Find** from the Search drop-down menu. In the Search dialog which appears, enter the search criteria next to the field headers and click on the **Include** check boxes next to these headers. Click on the **OK** command button to start the search. The system will highlight the first record matching this search criteria.

For example, if you wish to search for a record containing the date 00/00 (an invalid date), then enter **00/00** in the Date “Search For” field and click on its Include check box. Next, click on the **OK** command button. The system will then highlight the first record containing a date of 00/00.

Find Next Click on **Find Next** to search for the next record containing the criteria you defined using the Find function.

Replace Use the Replace command to search for a record using the record’s fields as the search criteria and replace that criteria with a new value. This function operates similarly to the Find command except that it replaces the search criteria with a replace value. It only replaces the specific fields in each record with the text entered in the Replace field.

For example, if you wish to search for the first record with a duration of 0:00 and replace the duration with 0:30, then enter **0:00** in the Duration “Search For” field. Enter **0:30** in the Duration replace field and click on its Include check box. Click on the **OK** command button to start the Replace function. This will update only the first record containing 0:00 in the Duration field with the value 0:30.

If you wish to replace all instances for this search criteria, then click on the **Replace All** command button.

Prompt on Replace: Turn this check box on (X) to have the system prompt you with a confirmation.

Once you have entered this criteria, click on the **OK** command button to replace all instances of the Search criteria with the Replace criteria.

Maintenance functions

Archive To archive the database, select **Archive** from the Maintenance drop-down menu. Enter the minimum and maximum filter range in the dialog which appears. To include a range, select the option, enter the range, and turn on (X) the Include check box for this filter. Repeat this step for all the filters you wish to include.

Load Filter Click on this command button to load an existing filter. A dialog will appear prompting you for the directory and filename of this filter. Select the filename and then click on the **OK** command button to load the filter.

Save Filter Click on this command button to save this filter for future references. A dialog will appear prompting you for the directory and filename you wish to name this filter. Select the filename and then click on the **OK** command button to save it.

Schedule Click on this command button to enter the scheduling criteria for this filter.

Note: If you wish to erase the data from your working directory when you archive it (essential if you have limited disk space), click on the Purge Selected Records check box.

Purge To purge selected records, select Purge from the Maintenance menu item. A filter dialog will appear containing the specific filters you can define for the call records you wish to delete. Enter your minimum and maximum range. To include a range, select your option, enter your range, and turn on (X) the Include check box for this filter. Repeat this step for all the filters you wish to include.

Load Filter Click on this command button to load an existing filter. A dialog will appear prompting you for the directory and filename of this filter. Select the filename and then click on the **OK** command button to load the filter.

Save Filter Click on this command button to save this filter for future references. A dialog will appear prompting you for the directory and filename you wish to name this filter. Select the filename and then click on the **OK** command button to save it.

Schedule Click on this command button to enter the scheduling criteria for this filter.

Restore To restore data, click on **Restore** from the Maintenance drop-down menu. A dialog will appear prompting you for the drive, directory, and filename of the data to be restored. Select the directory and filename and click on the **OK** command button to initiate this procedure.

Once you have completed editing the Call Database, exit to the main window. If any changes have been made to the Call Database, the system will prompt you to reindex the Call Database. Click on the **Yes** command button to do so.

Display Index File

The Index file (INDEX1.DAT) contains the indexing information used to sort the Call Database (MDR1.DAT) from the raw data file collected from the Meridian 1. Use the Display Index File function to scan through the records in the current site's Index file. This is a diagnostic tool which your support personnel use to determine the source of a reporting or costing problem.

To view the Index file, click on **Utilities** from the Database drop-down menu and click on **Display Index File** from its cascading menu. The Index File browser dialog will appear containing a line-by-line listing of each record in the Index file. From this dialog, you can scroll through the list of records to view the key values and the first and last positions of the records in the Call Database.

Whenever you have made any changes to the Index file, a re-indexing message will appear. Click on the **OK** command button to sort the Index file.

ReIndex Call Database

In some cases, the Call Database may not be correctly sorted with the Index file. This can be caused by edits to the Call Database or by some system failure which may cause it to lose records. This can cause problems such as unsuccessful or inaccurate reporting. The ReIndex Call Database function corrects the Index file to match the Call Database.

To reindex the Call Database, click on **Utilities** from the Database drop-down menu and click on **ReIndex Call Database** from its cascading menu. The system will automatically reindex the current site's Call Database.

List Call Database Dates

This function lists the dates of the call records for the current site's Call Database. Use this function to search for any invalid dates in the Call Database before generating your reports. If you find any incorrect dates, use this editor to search for and remove these call records from the Call Database.

To access this function, click on **Utilities** from the Database drop-down menu and click on **List Call Database Dates** from its cascading menu. A window will appear listing the dates of the Call Database records.

Use the scroll bars to search through this list of records for each date. This window contains a database list box which lists the start record, the date, and the number of calls starting on that date. The total at the end of this list displays the total number of call records for this database.

Once you have viewed these dates, close this window to exit to the main window.

Account Code Editor

Use this function to edit the account codes for call records in the Call Database after they have been collected from the Meridian 1. Once a call is stored in the Call Database, you can use this editor to add an account code to the call or modify an existing one. You can locate a call by selecting a telephone extension and reviewing each call for that extension.

To access the Account Code Editor, click on **Account Code Editor** from the Database drop-down menu. Select an extension from the drop-down list box and enter the new account code. Although the dialog displays all the fields of a call, you can only modify the Account Code and Extension fields.

Extension: Click on this drop-down list box to select the extension of the call that was made.

Orig. ID: This field contains the source from where the call was received.

Date: This field lists the date on which the call was made (mm/dd).

Digits: The Digits field lists the digits dialed for that specific call.

Time: The Time field lists the time at which the call was made in 24 hour format (hh:mm).

Duration: This field lists the length of the call in seconds (mm:ss).

Term. ID: This field lists the destination of the call.

Acct. Code: Enter the new account code in this field.

Click on the **Close** command button to save this information and exit to the main window.

Text File Editor

Call Accounting provides you with a method of modifying your existing text files (e.g., AUTOEXEC.BAT file). When you select Text File Editor from the Database drop-down menu, Call Accounting invokes the Windows Notepad utility. Use this editor to open any text files, edit them, and save them again.

File commands

Use these functions to open or create a file, or save and print a file. This function also allows you to set up your printer. Click on the **File** menu item from this dialog and select the desired option. Each function command in this list will prompt you with more details to accomplish the task.

Edit commands

Once you have opened or created a new file, you can edit it using a full range of editing functions. Highlight the text which you want to manipulate and select **Cut** or **Copy** from the Edit menu item. You can also insert new text into the current file. Position the cursor where you wish to enter new information and begin typing. Use the cursor keys and <Delete> or <Backspace> keys to maneuver around the text.

Search facility

To search for a specific word or phrase, use the Search menu item. Click on **Search** and select **Find**. The dialog will prompt: **Find What?**. Enter the word or phrase in this field and click on the **OK** command button.

Help facility

You can obtain help for this editor by clicking on **Help**. From here you can select from a range of Help features which describe the Notepad facility, how to use the Help feature, and the specific features of Notepad.

Reporting Options

The Reporting Options function allows you to set the features over the entire system which determine what will appear on selected reports. To access this function, select **Reporting Options** from the Database drop-down menu.

Note: To set the reporting options for any specific trunk, refer to the section Costing and Reporting Options. To set the reporting options on a digit pattern basis, refer to the section Call Reporting Options.

Figure 26
Reporting Options dialog

Reporting Options

☒ Include Account Calls ☒ Banner Page on Reports
☐ Replace Acct. Code by Name ☐ Use Acct. as Auth. Code
☐ Reports by Auth. Code ☒ Tax Summary on Reports
☒ Export Other Billable Items ☐ Update Data Before Reporting
☒ Include Auth. Code Calls ☐ Approximate Distance Calculation
☐ Replace Orig.ID with Inc.ID

Cost Summary Fields

Field 1: Field 2: Field 3:
 Field 4: Field 5: Field 6:

Bottom Line Message on Reports

Message 1:
 Message 2:
 Message 3:

To select an option from the Reporting Options dialog, click on the check box to turn it on (X). To disable the option, click on its check box again to turn it off (blank field). Enter the appropriate information in the remaining fields of this dialog by clicking on the field and typing it in.

Include Account Calls: If you turn this check box on (X), then the account code calls will appear on the Extension Detail Report. If account code calls are not used, you should turn this check box on (X) just in case a call resembling an account code call is detected.

Replace Account Code by Name: Turn this check box on (X) to print the customer's name, as found in the Customer Directory, instead of the account code in the comments column of a detail report.

Reports by Authorization Code: Turn this check box on (X) to include (on summary reports run with the cumulative data reset) the extension totals as calculated by the Authorization Code Report rather than the Extension Detail Report.

Export Other Billable Items: Turn this check box on (X) to process Other Billable Items even if there is no calls on the assigned extension.

Include Auth. Code Calls: Turn this check box on (X) to include authorization codes on your Extension Detail Report. If authorization code calls are not used, you should turn this check box on (X) just in case a call resembling an authorization code call is detected.

Replace Orig. ID with Inc. ID: Turn this check box on (X) if you wish to replace the Originating ID field with the calling line ID during indexing. this only applies to tandem calls with calling line IDs.

Note: This feature is normally used on networks using CLID/ANI where extension numbers are passed through the Meridian 1.

Banner Page on Reports: Turn this check box on (X) to have the system print a banner page at the beginning of the reports. This page will contain the various report filters.

Use Acct. as Auth. Code: Turn this check box on (X) to have the contents of the Account Code field interpreted as authorization codes on the Authorization Code Report.

Tax Summary on Reports: Turn this check box on (X) to include a summary of each tax structure at the end of the reports.

Update Data Before Reporting: Turn this check box on (X) to have the system perform data collection from the Data Supervisor (from MAT Commons Services) before generating reports. This will be used in instances where your system is performing continuous data collection to the Call Database through the Data Supervisor. If you are using a buffer unit, turn this check box off (blank field).

Approximate Distance Calculation: Turn this check box on in order for the system to identify and cost calls whose area code and exchange are not entered in the V&H Tables. The system will look up the NPANXX that closely matches this call record and assign its cost based on their approximate locations. You can identify this type of call as an Approximate Distance Calculation because on a report the call record will have an asterisk (*) next to its location.

Cost Summary fields

These six fields represent the headings for the summary section for each of the Extension Detail, Account Code, and Authorization Code Reports as well as headings on the Department, Division, Corporate, and Account Code Summary Reports. The cost of a call can be allocated to one or several of these fields depending on how the remainder of the configuration file is constructed.

Bottom Line Message on Reports

In these fields, enter the message you wish to have appear on the bottom line of each page of the report. You can enter up to three lines of text in this field, each containing up to 79 characters.

Once you have updated these options, click on the **OK** command button to save them and exit to the main window. Click on the **Cancel** command button to exit from this dialog without saving these changes.

Other Billable Items

The Other Billable Items function is used to assign any additional calls which are not being recorded by the Meridian 1 to a station. Use this function to enter costing information for calling criteria such as calling card calls or cellular calls. To assign these costs to the appropriate extension, you must either transfer the data from a file or you must copy the information from the printed credit card or telephone bill.

If the items you wish to enter are stored in a file in a format supported by Call Accounting, then you can transfer this data to the Other Billable Items database file ADDMDR1.DAT. If the items you wish to enter in this database cannot be transferred directly to the file, then you must type in the information from the source bill. Use the Other Billable Items editor dialog to enter this information.

To access the Other Billable Items dialog, click on **Other Billable Items** from the Database drop-down menu. The Other Billable Items browser dialog will appear. This window contains a grid which consists of menu commands and field headers. Each field in the record line represents the components of a billable item.

If you have an older version of the Other Billable Items Database, then a dialog will appear prompting you to convert this database to the newer version. Click on the **OK** command button to do so.

Note: The system will not let you open the Other Billable Items Database without this conversion process.

To add a new record to the Other Billable Items database, click on **Insert** from the Edit drop-down menu and enter the data in the fields of this record.

As with the other Call Accounting grid editors, you can use the Modify, Delete, Search, Replace, and Sort commands to assist you in entering this data. Use the Maintenance commands of Archive, Purge, and Replace to easily maintain this database's records.

Enter the information for the Other Billable Items database in the following fields.

Extension: Enter the extension to which the call will be charged (maximum of seven digits). This extension must correspond to a valid extension in the Billing Database. When you generate a report for this extension, this item will be included and summarized with the totals.

Digits: Enter the digits dialed for the call (max. 22). Do not include format characters in this field.

Location: Enter the location to which the call was made (maximum of 12 characters). This can match the location names used by the system's location books (e.g., NEWYORKNY) or it can be any name (e.g., New York).

Date: Enter the date of the call in the form 'mm/dd'.

Time: Enter the time of the call in 24 hour format (hh:mm).

Duration: Enter the duration of the call in seconds (hh:mm:ss).

Cost: Enter the cost of the call. This cost will be included on the reports for this item and will also be included in the totals for the assigned extension, department, or division.

Route Used: Enter the name of the type of route used by the call (maximum of 11 characters). For example, for a calling card call, enter: **Call Card**.

Account Code: Enter this call's account code (if any) up to 14 characters.

Comments: Enter a comment code or name (maximum of 15 characters) which will appear on the reports for this call (e.g., Calling Card, Accounting, or Jones).

Cost Field: From this drop-down list box, select the cost field which matches the value in the Cost Field of the Reporting Options function. These fields represent the headings for the summary section of the detail reports and the summary reports.

Note 1: Since the Other Billable Items database can contain calling information with varying formats, you cannot use the Select Report Filters function to set a range of Other Billable Item records for reporting.

Note 2: Remember to manage this database on a monthly basis in order to keep its information up-to-date.

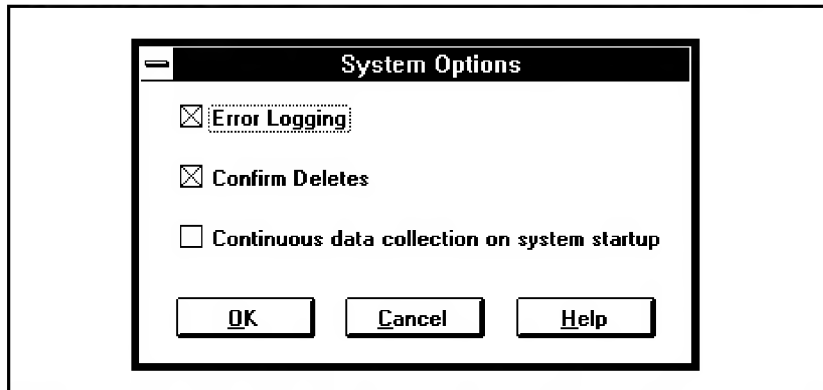
Once you have entered the information for this database, click on the **OK** command button. Click on the **Cancel** command button to exit from this dialog without saving these edits.

System Options

This function contains specific system options that you enable for optimum system performance. Return to this function to change these options throughout your Call Accounting session.

To access this function, click on **System Options** from the Database drop-down menu. You can turn the system feature variables on (X) or off (blank field) by clicking on the check box next to that option.

Figure 27
System Options dialog



Error Logging: Turn this check box on (X) to enable the system to keep track of errors.

Confirm Deletes: Turn this check box on (X) to have the system prompt you with a confirmation notice box. This box asks you if you wish to proceed with a delete function.

Continuous data collection on system startup: If the system is linked directly to the Meridian 1 and you are running a continuous data collection, turn this check box on (X). If the PC shuts down due to a power failure, this option will immediately invoke the data collection once Call Accounting is invoked.

Click on the **OK** command button to save these options and exit to the main window.